

Claims

We claim:

1. A device for the metered administration and in particular the infusion of a fluid drug,
comprising

- a) a container from which upon advancing a piston for administering said fluid drug
the fluid drug is displaced in dosed manner through an outlet and
- b) a catheter connected to an outlet of said container, whose front end facing away
from the outlet is connected to an injection needle,

wherein

- c) a valve is positioned between the outlet and the injection needle in a flow cross
section of the fluid drug and
- d) the valve, in order to prevent a self-discharge, only permits the flow to the front
end of the catheter if the fluid pressure exerted in this direction exceeds a pressure
on the valve caused by the dead weight of a fluid column in the device.

2. The device according to claim 1, wherein the valve is a passive one-way valve.

3. The device according to claim 1, wherein the valve only permits the flow once the fluid
pressure exceeds the maximum possible pressure of the fluid column.

1 4. The device according to claim 3, wherein the valve only permits the flow once the fluid pressure exceeds the maximum possible pressure of the fluid column multiplied by a safety factor higher than 1.

5. The device according to claim 3, wherein the safety factor is between 2 and 4.

6 6. The device according to claim 1, wherein the valve contains a valve body that is pretensioned at least against one aperture of a feed line leading to the valve body, with the pretensioning force being selected to exert a force at a contact surface of the valve body that exceeds the force exerted by the fluid column on the pressurized valve cross section, the contact surface sealingly enclosing the aperture.

7. The device according to claim 6, wherein the contact surface is formed at a sealing lip surrounding the aperture.

16 8. The device according to claim 7, wherein the valve body is tensioned over the sealing lip in the direction of a wall of a fluid-proof housing accommodating the valve body, the wall being situated upstream of said sealing lip.

9. The device according to claim 7, wherein the sealing lip is formed at the feed line.

21 10. The device according to claim 7, wherein the sealing lip presses transversely to the flow direction against a peripheral surface surrounding the flow cross section.

1 11. The device according to claim 6, wherein the valve body surrounds a surface area of the feed line and said feed line is provided in its area surrounded by the valve body with said at least one aperture forming the flow cross section.

6 12. The device according to claim 6, wherein the valve body is a sealing stopper sealingly surrounding the feed line protruding into the said sealing stopper and can be widened to form a flow cross section connecting to the at least one aperture of the feed line.

11 13. The device according to claim 6, wherein the valve body comprises at least one slit with sealing lips formed thereby which seal and open the flow cross section in the manner of a cardiac valve.

16 14. The device according to claim 6, wherein the valve body is forced by the pressure of a spring against the at least one aperture of the feed line.

16 15. The device according to claim 1, wherein the valve is arranged in a housing releasably connected to the outlet.

21 16. The device according to claim 15, wherein the housing is formed by an adapter section for the catheter.